IN THE CLAIMS

Please amend the claims as follows:

1-20. (canceled)

21. (Currently Amended) An apparatus for making a two-phase solution in which a phase state changes through a temperature conversion reaction comprising:

a heater for heating a number of reaction containers simultaneously and maintaining the reaction containers at a predetermined temperature;

a sampler for putting a two phase solution sample into each reaction container,

a stirrer for stirring the two-phase sample within the reaction container to yield a uniform solution, [[and]]

a cooler configured to be placed in the sample within the reaction container and which cools ~~for cooling~~ the uniform solution within the reaction container without cooling the reaction container ~~so as~~ to ~~obtain~~ yield a two-phase solution within the reaction container, and

a controller operably connected to the sampler, the stirrer and the cooler that ~~for controlling~~ controls the time of the start of the operation to the end of the respective above operations by controlling putting the sample in each reaction container, stirring the sample in the reaction container, and cooling the uniform solution in the reaction container.

22. (Previously Presented) The apparatus according to claim 21 wherein one phase of said two-phase solution comprises a cycloalkane compound and the other phase comprises one or more compounds selected from among nitroalkanes, nitrites, alcohols, alkyl halides, ethers, ureas, amides and sulfoxides.

23. (Currently Amended) The apparatus according to claim 21 wherein said cooler is a syringe having a cooling apparatus, a sampler for putting a solid ~~of which the~~ which has a temperature that is lower than ~~that of~~ the reaction container into the uniform solution or a stirrer

for mixing [[the]] a compound having a low boiling point directly into the uniform solution within the reaction container.

Claims 24-30 (Cancelled).

31. (Currently Amended) An apparatus for making a two-phase solution comprising a reaction container having a heater for heating the reaction container, a stimulator for physically stimulating a material two-phase solution within the reaction container to yield a uniform solution, and a cooling apparatus configured to be placed in the uniform solution within the reaction container and which cools ~~for cooling~~ the uniform solution within the reaction container without cooling the reaction container.

32. (Currently Amended) The apparatus according to claim 31 wherein said cooling apparatus includes a means for extracting the uniform solution from the reaction container, a means for putting a solid ~~of which the~~ which has a temperature that is lower ~~of that of~~ than the reaction container into the uniform solution within the reaction or a ~~mixing~~ means for mixing a compound having a lower boiling point directly into the uniform solution within the reaction container.

33. (New) The apparatus according to claim 21 wherein said cooler is a syringe having a cooling apparatus.

34. (New) The apparatus of claim 21, wherein said cooler is a sampler for putting a solid which has a temperature that is lower than the reaction container into the uniform solution.

35. (New) The apparatus of claim 21, wherein said cooler is a stirrer for mixing a compound having a low boiling point directly into the uniform solution within the reaction container.

36. (New) The apparatus according to claim 31 wherein said cooling apparatus includes a means for extracting the uniform solution from the reaction container.

37. (New) The apparatus according to claim 31 wherein said cooling apparatus includes a means for putting a solid which has a temperature that is lower than the reaction container into the uniform solution within the reaction.

38. (New) The apparatus according to claim 31 wherein said cooling apparatus includes a means for mixing a compound having a lower boiling point directly into the uniform solution within the reaction container.